APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,513	09/21/2000	Steven Robert Farago	AUS9-2000-0436-US1	6045

7590   07/31/2002

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EXAMINER
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ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/671,513	Applicant(s) FARAGO ET AL.
	Examiner Kimberly N. McLean	Art Unit 2187

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _21 September 2000_ .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-25_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1,5-7,11-13 and 17-25_ is/are rejected.

7) ☒ Claim(s) _2-4,8-10 and 14-16_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _20 November 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _3_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   The enclosed detailed action is in response to the Application and the Information

Disclosure Statement submitted on September 21, 2000.

Specification

2.   The disclosure is objected to because of the following informalities:

Page 1, lines 7-10 are missing application numbers for the related applications.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 20-21 and 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

It is not clear from the specification nor the claims what is meant by a "dead element" or "used

element".

The Examiner has interpreted "dead element" as an empty element and "used element" as an

occupied element.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1, 5-7, 11-13 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated

by Dupree et al. (USPN: 5,655,133).

Regarding claims 1, 7 and 13, Dupree discloses a method for managing data elements in a bi-

directionally growable data structure, the method comprising responsive to an indication that a

data element is to be placed into the data structure advancing a head pointer one memory

location in a direction indicated by a state of a direction flag (C 25, L 20-25, L 33-44; C 24, L

67; C 25, L 1-2 – the direction flag is the means used by the user to indicate which direction the

stack grows); and placing a new data element into the memory location indicated by the head

pointer (C 25, L 20-25, L 33-44). Additionally, stacks are data structures controlled by software

[instructions] and thus it is evident that the above features of advancing a head pointer and

placing new data into the memory are implemented as instructions in a computer program

product in a computer readable media.

Regarding claims 5-6, 11-12, and 17-18, Dupree discloses a stack data structure (C 24, L 58-67;

C 25, L 1-59 – a stack is a first in last out structure).

Regarding claim 19, Dupree discloses a processor (Figure 2; C 6, L 1-2); a memory (Figure 18,

Reference 306; C 24, L 62); wherein the memory comprises a bi-directional stack (C 24, L 62, L

64-66).

Regarding claim 20-21, Dupree discloses the bi-directional stack comprising a dead element

(empty location) and a used element (occupied location).

7.   Claims 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Krosh et al,

ACM, "A Multiple-Stack Manipulation Procedure".

Regarding claim 22, Krosh discloses a stack stored in a linear memory array (Figure 2); wherein

as elements are added to the stack, each of the added elements are placed into a next empty

memory location at an opposite end of the stack from the end of the stack that a previously added

element was placed (Page 28, 1st column, 1st paragraph – Korsh indicates that the elements

making up the stack space (stack comprises a stack pair) grow towards each other which

indicates that the data is stored proportionally, current data is stored at an opposite end of

previous data stored).

Regarding claims 23-24, Krosh discloses the stack comprising a dead element (an empty location

in the stack) and a used element (an occupied location in the stack).

Regarding claim 25, it is evident that the data items are removed from a memory location at an

opposite end of the stack from a location of a previously removed element so that new data may

be written to the memory location in a manner wherein the stack elements of the stack are

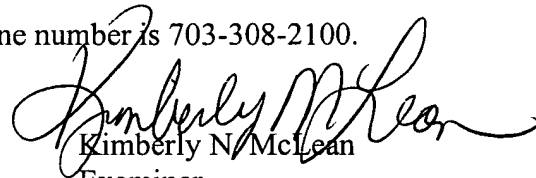growing towards each other.

Allowable Subject Matter

8.   Claims 2-4, 8-10 and 14-16 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kimberly N. McLean whose telephone number is 703-308-9592.

The examiner can normally be reached on M-F (9:00 - 6:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Do Yoo can be reached on 703-308-4908. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-7467329 for regular

communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-308-2100.

Kimberly N. McLean
Examiner
Art Unit 2187

KNM
July 27, 2002